



Geel2000 Language Schools

# Computer and Information Technology

## Prep.1 Second Term



**Name :** .....

**Class :** .....

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# Unit 1: "Scratch Program "

## "Basic programming concepts using Scratch program "

**Scratch program** : Scratch is a graphical programming language using visual and logical steps to create imagination and creativity projects .

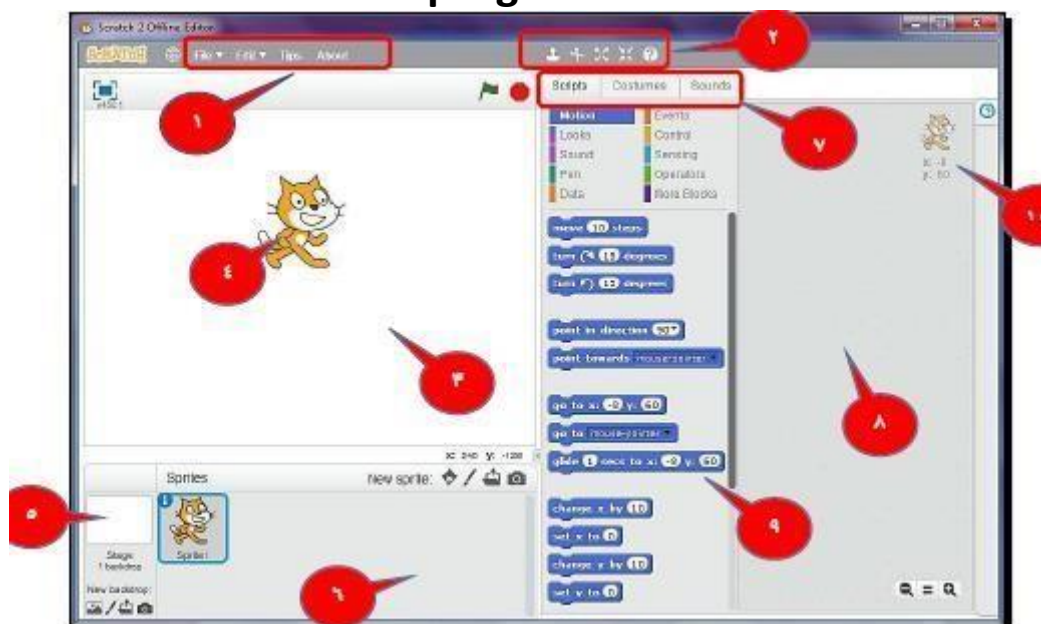
### Scratch software features:

- 1- Helps to learn the fundamentals and concepts of programming.
- 2- Free software.
- 3- You can deal with connected to the internet or without an Internet connection.
- 4- Fully Supports Arabic language.
- 5- Using Scratch software to work and design applications serve the rest of the scientific material.
- 6- You can set up programs in an easy way by installing orders with each other.
- 7- Helps to think in a logical way visually.
- 8- Scratch can be run on different operating systems such as windows, Linux.

### Ways to run scratch program :

- 1- Online from the internet.
- 2- You can download a copy of the program on your computer.

### Interface of Scratch program



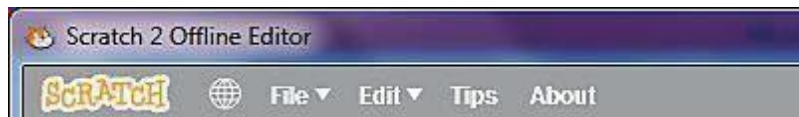
### The most important features of Scratch program interface:

1. menu bar.

2. toolbar.
- 3-Stage area (it appears as a result of work or project).
4. The Sprite.
5. the backdrop of the stage (you can add different backgrounds to stand).
6. Sprites Area (numbers of sprites used by the project).
7. tabs (Script-Costumes-Sound).
8. the Script Area (the code sections gather "installing a set of drawing commands in a specific order .
9. Blocks Area( command sets area.)
- 10-point (X, Y) represents the position of the sprite on the platform Stage.

## Change scratch interface to Arabic :

- 1- from the menu bar of the program click on the icon shown in the following figure :




- 2- from the drop-down list that contains many languages choose Arabic as following :



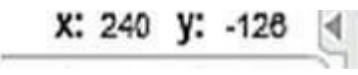
## Identify the Stage area



- 1- shows the highest platform symbol and represents the control start and stop the program

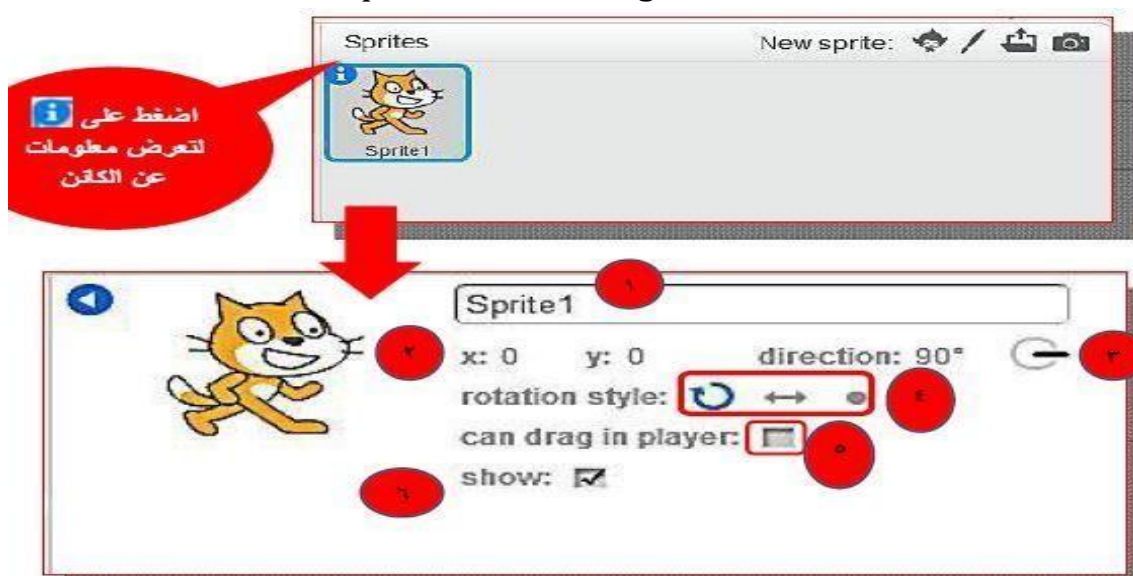
2- Uses the icon  in size the platform Stage to full screen .

3- Press this icon  return to the defaultscreen

4- mouse Coordinate Status(X,Y) Stage. 

## Sprite Information :

- 1- sprite name (you can modify it )
- 2- Place the sprite and determined the current location of the sprite on the stage (0,0)
- 3- The direction of movement of the sprite
- 4- The sprite rotation
- 5- The possibility of using the mouse, drag the sprite while running the project.
- 6- Choose Show or hide sprite from the stage.



## Scripts tab:

A different sets of Blocks (graphical commands for each group), which are used in programming sections, each set with a color different from the rest of the other groups as shown in the following figure



**Code blocks:** the collections of blocks that are install in Scripts Area in a particular order (as install game Puzzles) .

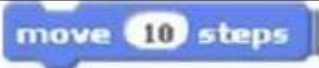




**Motion:** Contains Blocks (commands) used in the movement of sprites or the rotate or identify directions on the stage.

**Events:** Contains Blocks used to determine event which is located (or events) on sprites to start implementation of the project .

**Looks:** Contain Blocks using control patterns and shapes of sprites and colors.



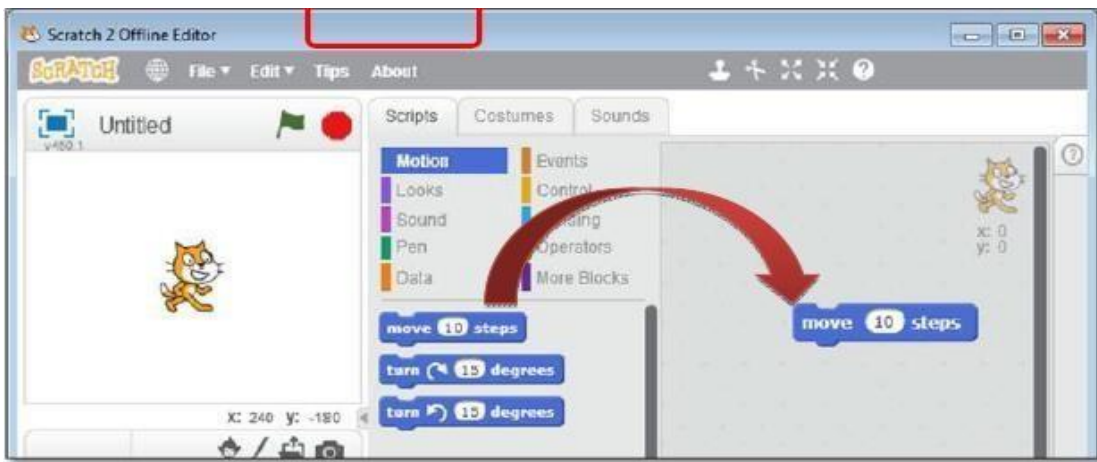
Identify some Blocks "commands" set Motion such as:

	Block	Describe
<u>Motion</u>		The sprite moves a certain number of steps.
		The sprite direction of movement (right-left-top down).
		The horizontal axis and the vertical axis) of the sprite (x , y)
<u>Control</u>		To wait the specified number of seconds.
<u>Event</u>		To implement the project.

**You can move the sprite on the Stage, follow these steps:**

from Motion group drag and drop in the Script Area as in figure :

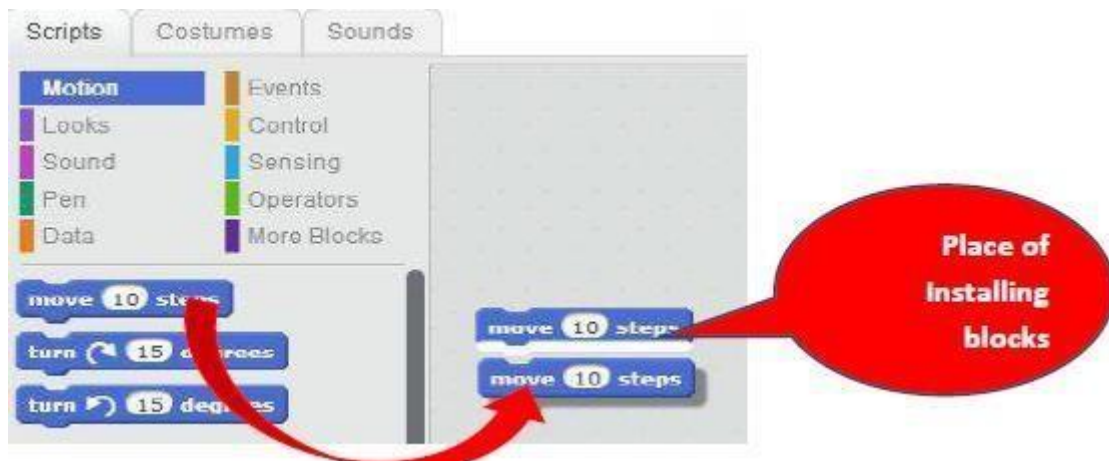




Mouse click on the **move 10 steps** block in the script area.

**Collect of code blocks in scripts area to shows constant movement to the sprite on the stage using the Motion Control Blocks :**

1- from Motion group drag and drop **move 10 steps** in the Script Area.

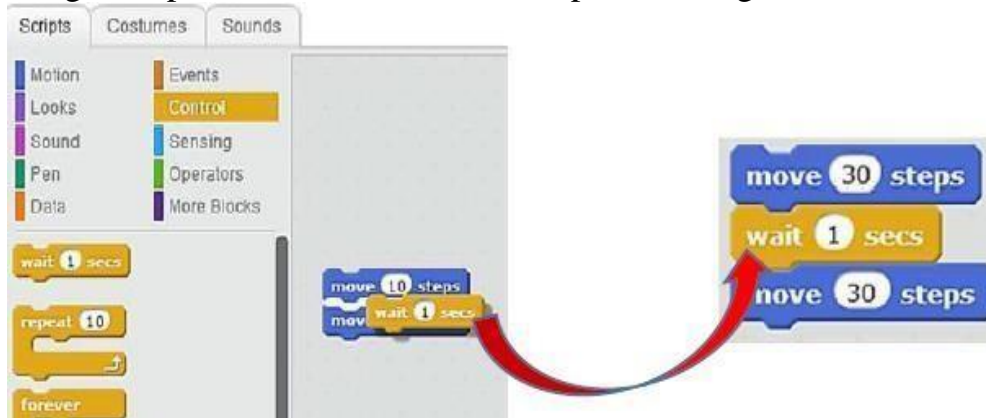


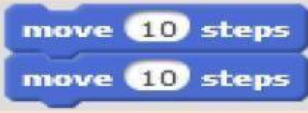

-To make constant movement (s) add move block again and combination 0020under previous command as follows:

-Notice that white line down to clarify the place of snapping.


-Note that when executing the previous project, the movement was quickly to address it can use the Wait command (waiting) of Control Blocks with the following :

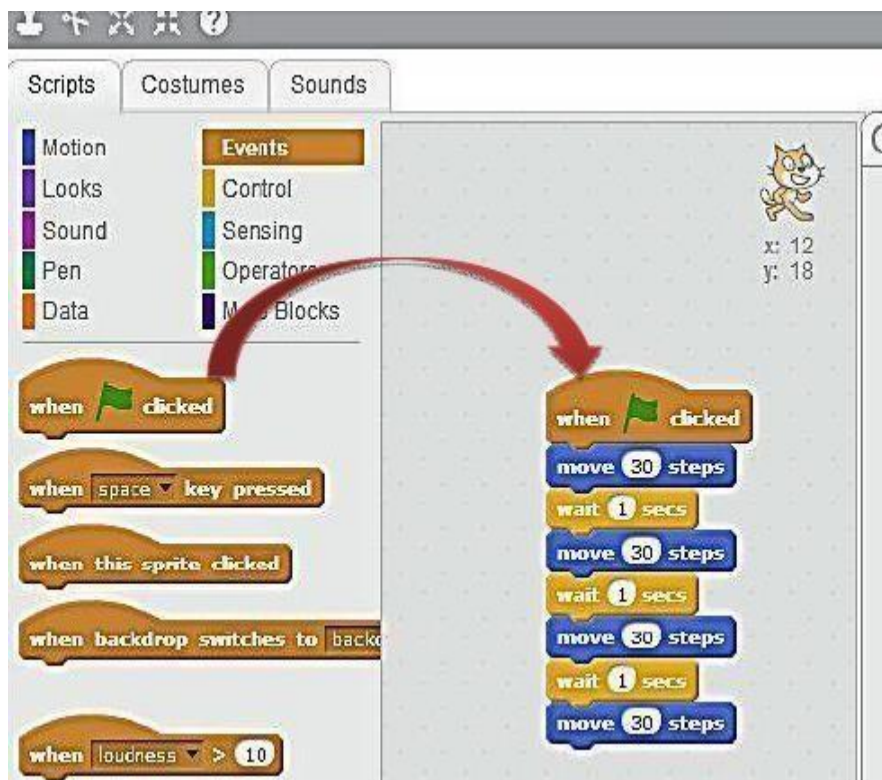
Drag &drop block in **wait 1 secs** script area as figure:



First step	Second step	Third step
		
Put move blocks	Wait command is installed in the specified location and shows a white line between the two move blocks	The final form of the section after installing the script blocks in order of execution

**Event Blocks :** to view the implementation of the project in the script section Script Area

use  Event Blocks, to be installed in the top section of codeblocks:



To implement the project with the event  click on the icon , and to stop execution press the icon .

### **Repetition commands block in the code blocks :**

Control blocks has duplicate commands

1-repeat : is used to repeat work specified number of items .



2-forever : is used to make repeat infinite times.



to design a project where continuous sprite animation a set number of times follows:

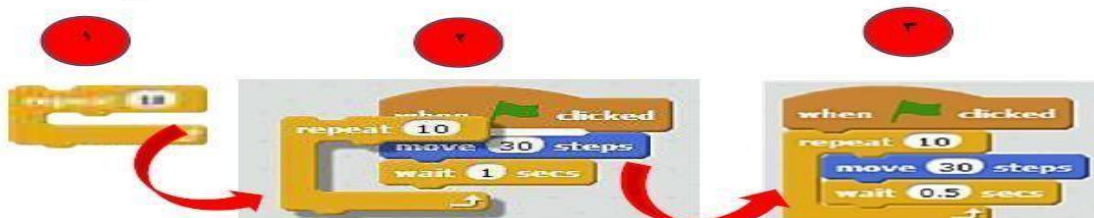
-Press Control Blocks show commands.



-drag and drop repeat block to the Script Area as in Figure:  
Set and Arrange the code blocks as following :



Set and Arrange the code blocks as follows:



### Save project :

- 1- From file menu select save as
- 2- Select the storage place
- 3- Type the file name
- 4- Click "save " button .

### Different ways to add new sprite :

-Click on the shape  toolbar add sprite.

Sprite library window appears where large groups of sprites are divided into different categories such as: categories (Animals and People...) as following :

- Select a sprite (ball).
- Press the OK key.

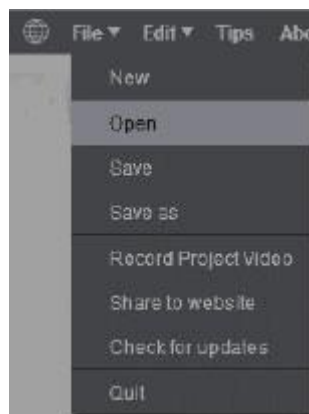


## Create new file



From File menu select → New

## Open an existing file



From file menu select → open

## Dealing with sprite on stage

s	1	2	3	4	5
icon					
function	minimize	maximize	duplicate	delete	help

### Reduce the size of the sprite:

-Click on icon

-Click on an sprite ball several times .record your notice.



### enlarge the size of the sprite:

-Click on icon.



-Click on sprite ball several times record your Notice.

**doubling the number of sprite (ball):**

-Click on icon.

-Record your note

**using the help:**

-Use the icon to help explain any command block, as in the figure.



**Identify how to double the number of sprite using drop-down menu :**

1- Click the right mouse key on the sprite (cat).



2- choose Duplicate from the drop-down list.



**Delete sprite**

-Activate the sprite you want to delete (by select).

-Press the right mouse key.

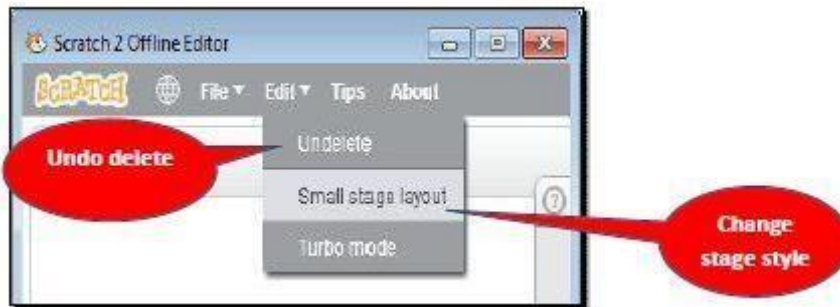
-Select delete from the drop-down list.

Note : Delete the sprite from the sprite area , it is also deleted from the stage .



using the Edit menu from menu bar of the program you can:

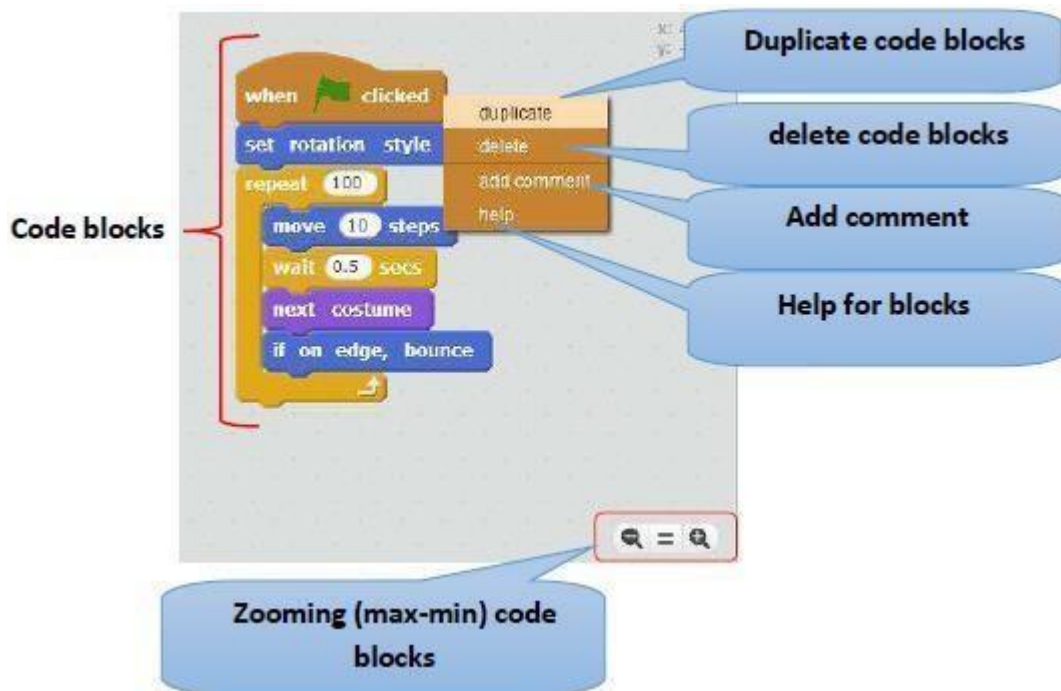
- Undo Delete sprite choose Undelete.
- To change the style of the Stage during design (a small stage layout) choose Small Stage Layout.



### Dealing with code blocks :

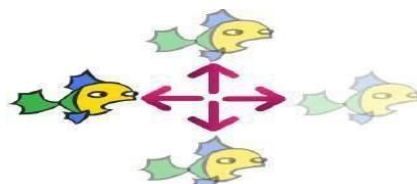
In order to be able to deal with code blocks, do the following:

- press right mouse key to show the menu and contains several choices

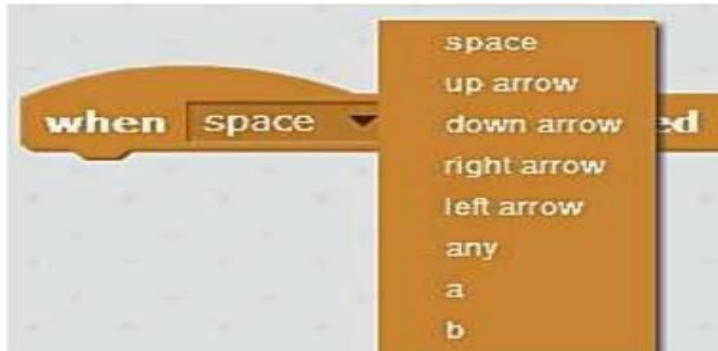


### ACTIVITY :

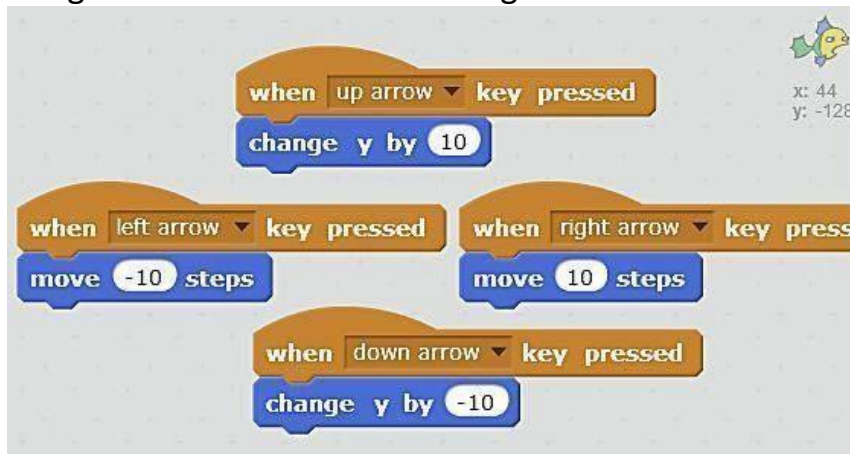
Design a project which uses some events from the Event Group to control the movement of a sprite (fish) as following :



- 1- Add sprite (fish) from the sprite library.
- 2- Choose the event from "Events Blocks."
- This event is when you press a key ( ..... )
- Click on the arrow menu of choices.
- 3- Drop-down list appears that contains choices for events (associated with
- 4- keyboard buttons occur when pressed).



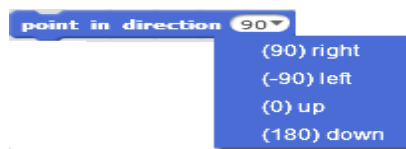
- 5- fixing the code blocks as following :



**Note:**

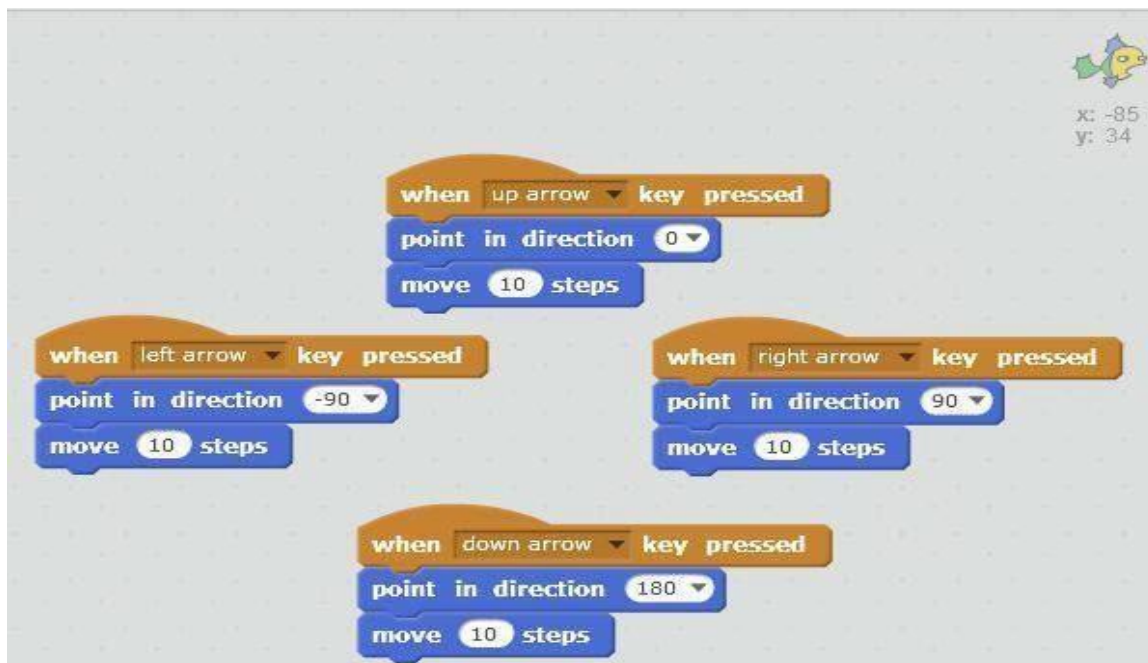
- The project is executed when you press one of the arrow keys on your keyboard.
- Notice the movement of the sprite(fish) in the direction of the arrow without modifying the direction.

**Fixing code blocks using events :**



you can change the orientation of a sprite(fish) on the Stage By fixing code blocks using events

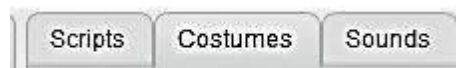




## Dealing with Stage Background and Sprites Costumes

Tab bars : There is a Scratch program interface tabs bar, is one of the most important parts in the program where you can deal with:

- ☐ Tab: Scripts (dealing with code blocks and script area section orders).
- ☐ Sound tab:) handle playback and recording sounds).
- ☐ tab) Costumes/or Backdrop): (dealing with aspects of Sprites/or background stage) and adjustment.



**remark in tab (Costumes or Backdrop):**

**First:** when you activate the Sprite tab appears (Costumes).

**Second:** when you activate the background Stage catwalk shows tab (Backdrops) instead of (Costumes) as following :



When you press tab in both cases Costumes you can use drawing tools and colors available and drawing as following :



## Dealing with stage background

**Background of the Stage:** Is the image covering (or add) the Stage, be behind Sprites to add to the project aesthetic form.



### Different ways to add background :

you can choose a photo as the background of the Stage for your project, which is implemented or interactive story that will design, and through the

“New backdrop”. of the following ways:

1. choose wallpaper from the library program.
2. draw a new background using the paint That program.
3. upload a background image from a file Storage medium.
4. using the camera in the camera image for the background



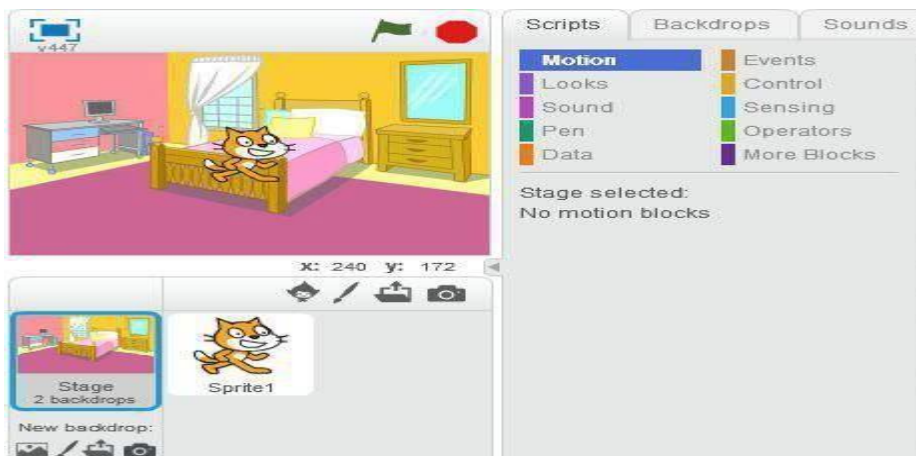
### Add background to the stage backdrop :

To add a background to the stage to fit your project, do the following:

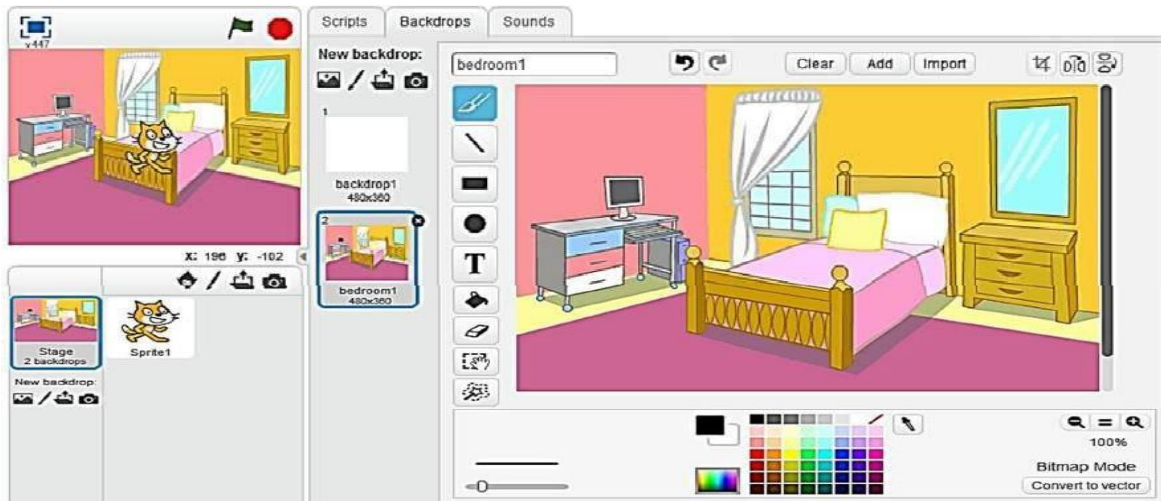
- Click on icon.
- Show Backdrop backgrounds library window Library with many pictures is placed as backgrounds for the stage.
- Choose an appropriate image for the project.
- Press OK record notice



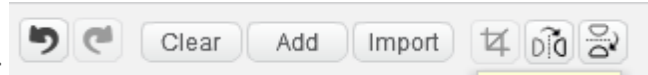
Add stage background



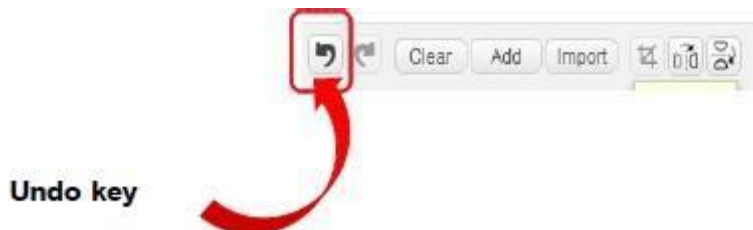
**The back drop tab from bar tabs :** when you activate background stage . Backdrops tab appears, and when pressed you can use drawing tools and colors available for modification and graphic in the background of the stage as following :



When you press the flip right left selection (edit toolbar) reflected the background image horizontally like a mirror



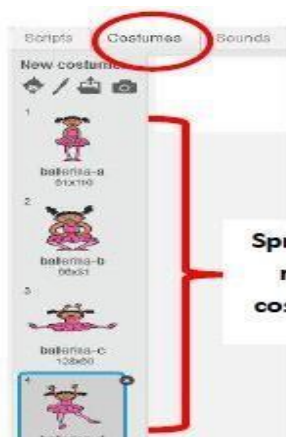
**Note :**



Undo key

## Costumes tab

- appearances intended Sprites are different forms of the same Sprite
- you can identify the aspects of the active Sprite when pressing tab Costumes ,
- each Sprite can have more than one form as following :



Sprite has  
many  
costumes



Sprite has 2  
costume



## Steps to review the forms of appearance of the sprite :

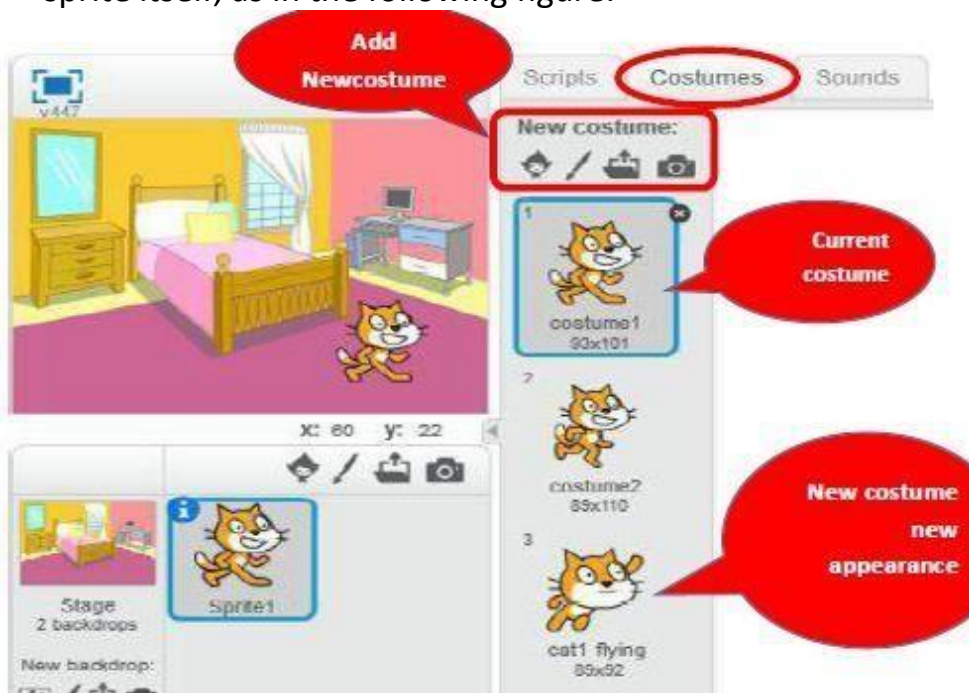
1. active Sprite in the Sprites area.
2. click on the tab for the Costumes in bar tabs, note showing different forms of the same sprite.
3. you can edit the appearance of the sprite by using drawing tools and colors.
4. use painting tools and colors to modify the appearance of the sprite.



Use the toolbar to manipulate the sprite as described in modify the background of the stage.



1. Add the appearance of the sprite forms of different sprites on the form sprite itself, as in the following figure:





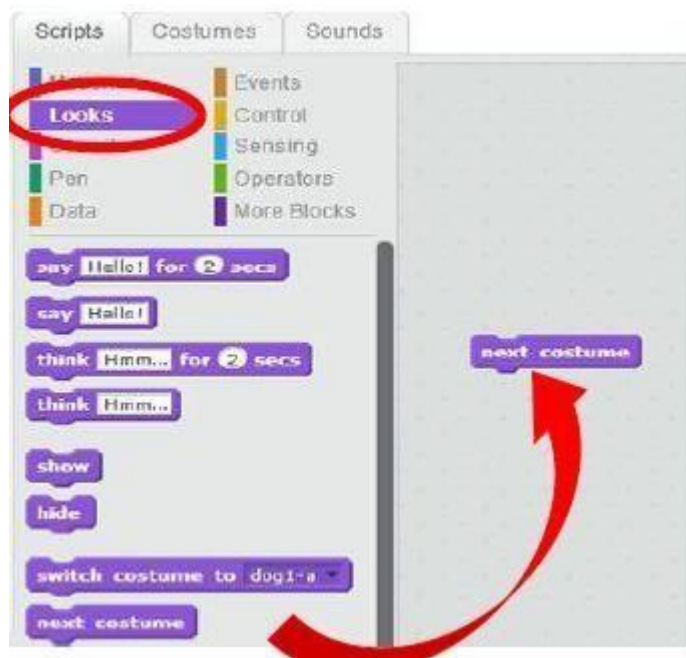
## Switch between different forms of the same Sprite :



you can switch between the different forms of the sprite by using the command from the Group looks by following:



1. click and drag the command and throw him in the area of programming Script Area.
2. click on it in the script area .
3. press more than once,



appearances of different sprite format switch noted, suggesting to you that the sprite is moving in the same place. Examples of appearances (different shapes) for some sprites as follows:

1. Switch between costumes of Sprite (cat):




- 2-switch between costumes of Sprite (bat):



- 3- switch between costumes of Sprite (player):





to illustrate switch different appearances of the same sprite with his movement on stage, install and arrange the commands in the following code:

Code blocks / scripts	Description	notes
	<ol style="list-style-type: none"> <li>1. Movement (10 steps).</li> <li>2. Switch between costumes of the sprite.</li> <li>3. Wait a time package (0.5 seconds).</li> <li>4. Put the previous commands within a specific repeat (30 times).</li> </ol>	<ul style="list-style-type: none"> <li>• Press on the icon to execute commands</li> <li>• repeat value (100 times)</li> <li>• Record your notes.</li> </ul>

## Cop the code blocks from one sprite to anther

Use the constant repetition forever rather than repeat order.

Use the   icons to turn on and off the program

**to use the same code blocks of the project with some commands do the following:**

- Add new sprite (as required) to the sprites area.
- Ever did code blocks of the movement sprite (cat) to switch between different looks you can save time installing same code blocks, copy it to a new sprite the following :
  - Click and drag the code blocks (cat) in the script area and throw him on the new sprite in sprite area
















Replace the forever command instead of repeat in the code blocks

- Press on the icon to  start the program.

- Press on the icon to  stop the program.



Command	The result	description
		A message appears (2 seconds) and then disappears.
		A message does not disappear.
		A message appears, but in the form of "thought" style (2 seconds) and then disappear.
		Active sprite appears on the Stage.
		Active sprite disappears from the Stage
		Color and style effects on the sprite
		Delete any effects on the active sprite.

## Chapter4: Pen Blocks

Pen Blocks of orders are : important orders in educational projects, it makes the sprite draws lines and painted during his movement, and you can use them in drawing different geometric forms easily.



To use Pen blocks to draw lines during the movement of the sprite, colored with different colors :

-Choose the command



-Rode the command  
steps).







with changing value to (150

-Click on the section









The following table shows some Pen set commands:

blocks	Function
	Put the pen sprite movement draw a line
	Lift the pen moves the sprite without drawing
	Customize the color of the pen is selected inside the box
	Clear any lines and graphics on the stage

## Set pen color Block




Dear student you can assign the pen color through the command box as follows

Steps	Red color	Blue color
1. click inside the box with your mouse.		
2. click on any external color is right in front of you.		
3. Note the color is placed inside the box.		

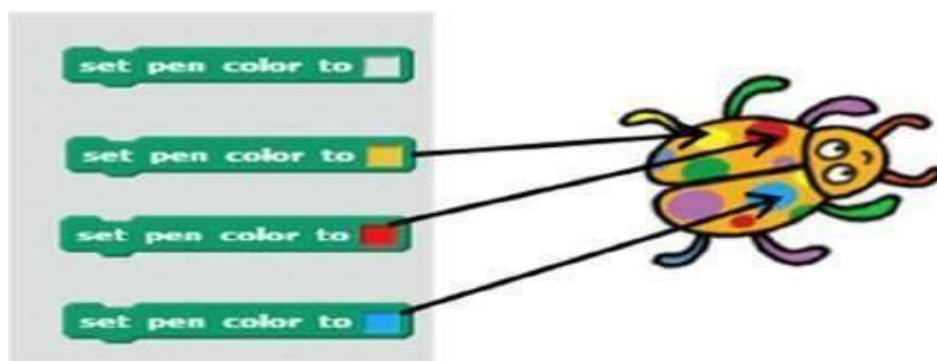
## Steps to use a sprite colors

-Add a new sprite from sprite library, choose

-Click & Drag  Block in scriptarea

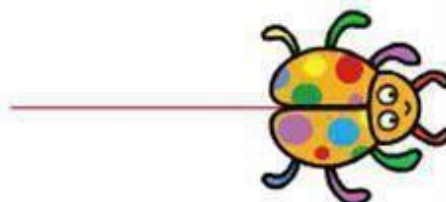
-Press box coloring it. 

-Choose any color spot present on the sprite and click on it (let it red).



## Pen size line drawings of Pen Set

-You can draw a red line install software section the following set of commands:





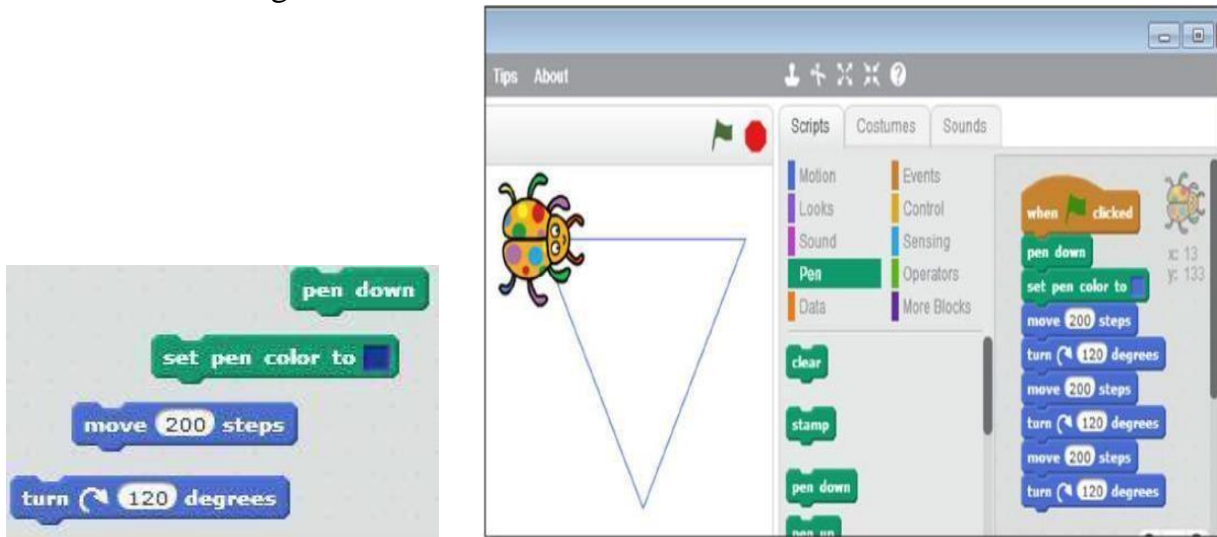


-To clear the lines drawn on the stage, use the command

## Draw regular geometrical forms :

To draw an equilateral triangle, notice it consists of three equal lines. To draw them do as follows:

- 1- Move the shape 200 step to draw the first triangle side.
- 2- Draw the second side changing the direction 120 degree.
- 3- Repeat the same steps three times
- 4-Use the following orders.

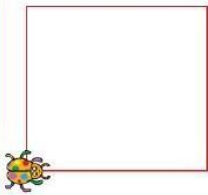



you can use the REPEAT order changing the number to draw the triangle, you changed it

3 minutes



To draw lines (sides) box following :

Result	description	Code blocks
<p>Draw a square red-colored as in Figure.</p> 	<ol style="list-style-type: none"> <li>1- determine the direction of the sprite 90 landscape.</li> <li>2- clear the platform.</li> <li>3-put the pen.</li> <li>4- change the pen color to red.</li> <li>5- modify the frequency value (4 times.)</li> <li>6- is moving forward (200 links.)</li> <li>7- the turnover value of 90.</li> </ol>	

## Sound Blocks :

the use of sounds adds to stories, games and projects beautiful and interesting, Scratch program contains a collection of sounds and deal with different and divided types to are angel of categories such tunes category, the category of sounds, sound effects category, the category of animal sounds, and the sounds of musical instruments.



**Steps to add sound clip to record the word [SQUARE]:**

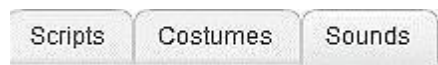
1- Add order from SOUND

3- Press the arrow in the drop list



3- Select RECORD

4- Select SOUND tab



5- Press RECORD .



6- Record square

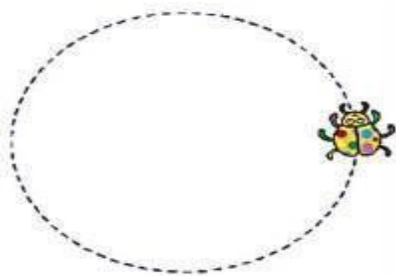
7- Press STOP



8-Write SQUARE



**Draw a circle by drawing a set of points as following :**



- Place the pen.
- Move the sprite (small).
- Lift the pen.
- Move the sprite without drawing.
- Repeat the steps with the specified number.
- Rode commands that are required to get the desired shape.

**The following table shows how to implement the draw the desired shape:**

Code Blocks	description	result
	<ol style="list-style-type: none"> <li>1. pen mode.</li> <li>2. the sprite movement (5 steps.)</li> <li>3. lift the pen.</li> <li>4. the sprite's rotation angle 5.</li> <li>5. the movement of the sprite (5 steps) without fee.</li> <li>6. place the previous command within command repetition (500 times.)</li> </ol>	<p>Draw a circle by dots</p>

Note that in the previous project dear student

1. the direction of the sprite at the beginning of the movement.
2. clear the platform.
3. change the pen color to blue.

These orders are placed outside the repetition (performed only once).

4. run the project icon.

5. you can use fewer in frequency order.

remember	
<b>Pen Blocks :</b>	
blocks	Function
pen down	Put the pen down
pen up	Lift the pen up
set pen color to	Chose color
clear	Clear the stage

# Sensing Blocks

- is used in many games projects to reach the desired result, and achieved the desired goal.
- Sensing range of events are the most important skills and depend on many software projects based on design and construction of games and educational applications.
- Sensing group events are used in code to achieve a specific goal upon the occurrence of an event is used like the following events.



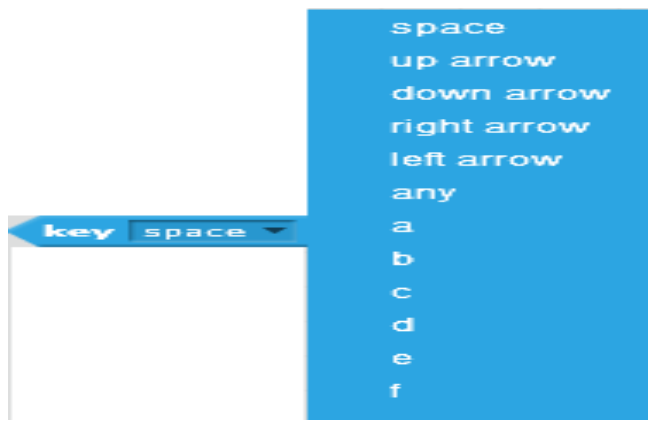
## - sprite touching another One



## -sprite touching a particular color

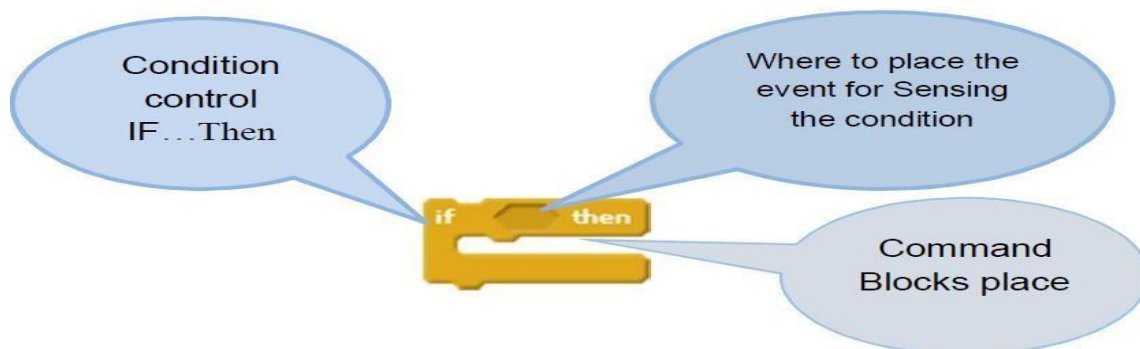


## -Pressing any key of the keyboard



## Control Blocks :

use conditional control command from the Control Group. Conditional IF control command. is used in the implementation section according to a particular condition code, if the condition inside and commands are executed if not inside of instructions.



Sensing group events are put in place in order to control command IF....Then as follows :

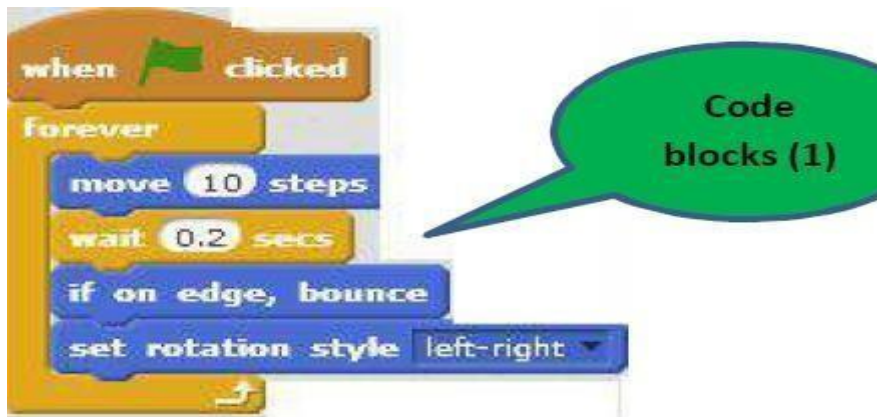


To design project, installing the desired goal script section when the green flag clicked, so follow these steps:

First: the movement of a sprite (cat) .

Programmatic section of the movement sprite (cat) on the catwalk regular traffic round trip.



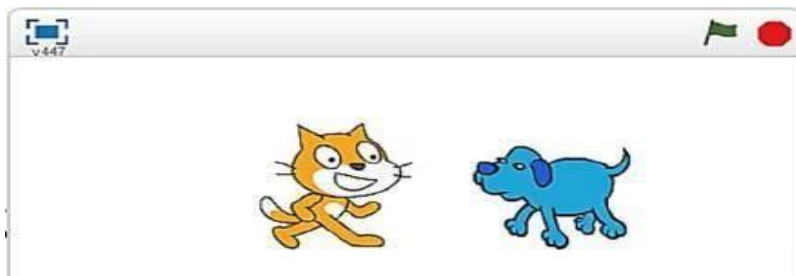


Second : handle sprite (Dog2).

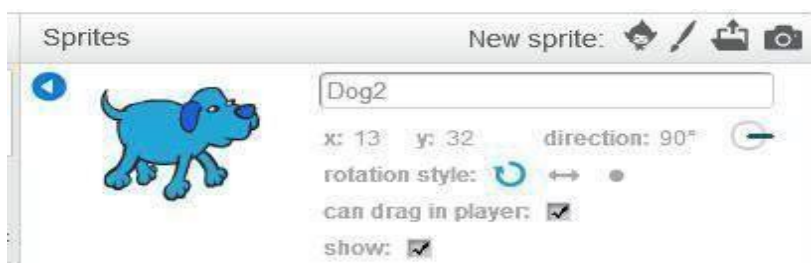


- Add new sprite (Dog2).
- Change the orientation of an sprite (Dog 2) is opposite to the direction of the sprite (cat), so choosing flip left – right from your toolbar to edit and draw the sprite.

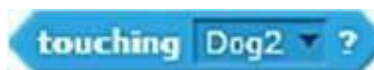
**-To reflect the sprite horizontally**



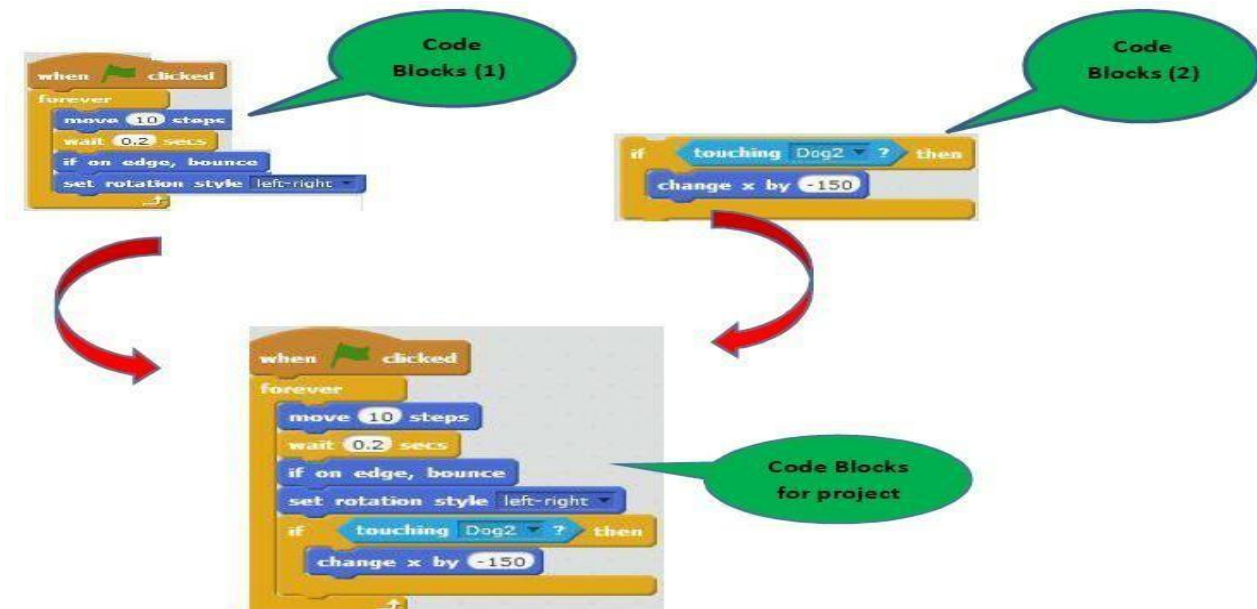
To move the dog by hand on the platform (use your mouse to place around the sprite (Dog2) to chase a sprite (cat) during operation of the project), use the info sprite (Dog2).



**-Active sprite (cat) and choose the event**

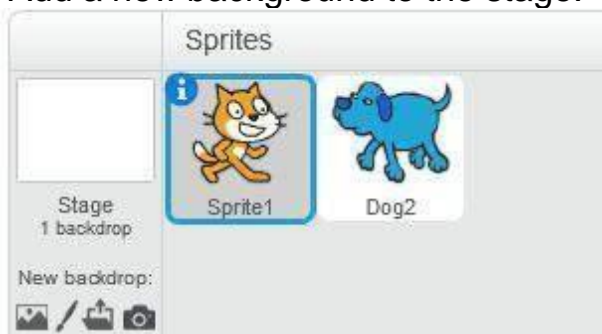


to implement code blocks (2) installing the cod blocks (1) to be the final script section to carry out the project as follows:



To edit project script section select the required command arrangement and fitted as follows:

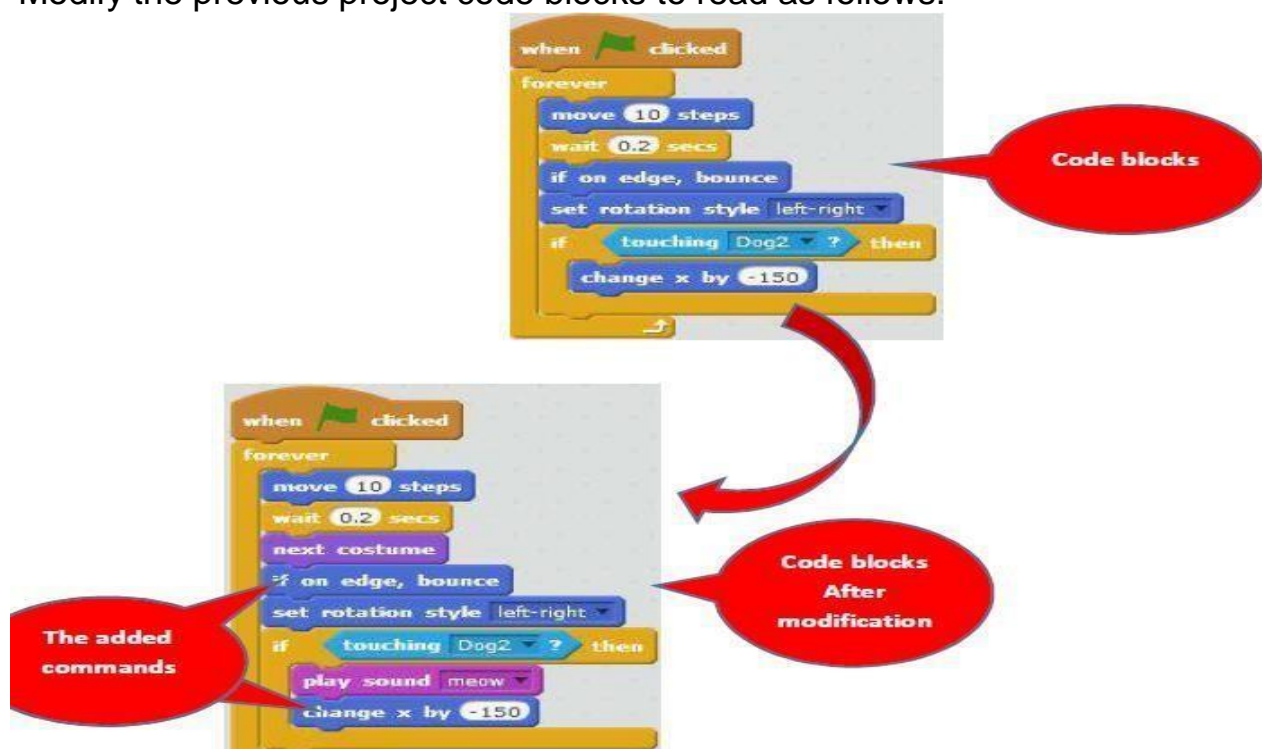
- Use the command for displaying different aspects of a sprite forms (cat.)
- Add a new background to the stage.



- Use Ordinance sound for a sprite (cat).



- Modify the previous project code blocks to read as follows:



Save project (cat and dog game 2)

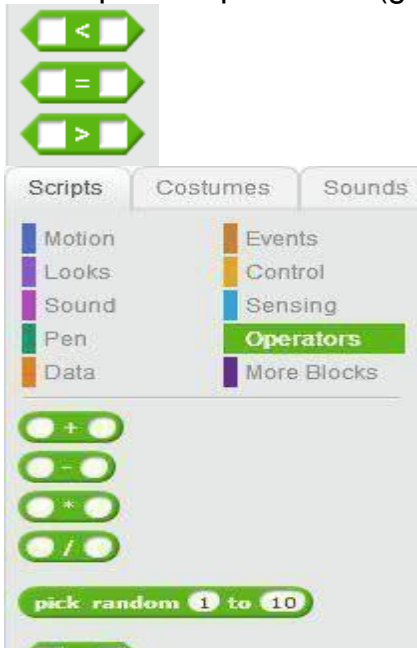
# Using some of operators Blocks

There are many processes within the Group of Operators such as follows:

- 1- Calculations (collection, etc.) and use computational transactions Arithmetic Operators




- 2- Special operations (greater than, less than, etc.) and use them Boolean Operators



you can use transactions within the code block and show the result we use plan Operator as in the following table:

Operator	Example	Sprite & Result
		
		
		
		

## To install the code blocks as follows:

- Choose the command to specify a point (X, Y)  location of the sprite on the stage.
- Choose a command repetition Forever to do repeat endlessly.
- modify value Y using a coefficient that generates a random number as



follows:



## Second Unit : The internet

### Internet is:

-A network which is composed of a group of connected networks. Each network consists of a group of computer sets, communication equipment and lines, in addition to necessary software. through these, the communication process is done.

### Connect to the internet requirements

If you want to connect to the internet, you will need the following:

1. A computer set with a network adapter
2. Internet Service provider (ISP), which is a company that provides the service to customers.
3. An internet browser, which is a software

The most known browsers are : Google Chrome, Internet Explorer and Firefox.



### Protocol

there must a kind of understanding and agreement on a certain rules to be followed in speech and communication.

Computer sets are the same on the internet; they need certain rules for communication, which is called a protocol.

Protocols send and receive data on the internet; each of them has a certain job.

### The most used protocols on the internet:

- TCP/ IP protocol

This protocol is used in connecting computer sets to the internet

It consists of two important protocols:

- TCP (Transmission Control Protocol) which is responsible for validating data transformed from a set to another.
- IP ( Internet Protocol) ,which is responsible for transforming data from a set to another.
- FTP ( File Transfer Protocol) , which is responsible for transform data from and to the internet

## Website

It is a webpage or more, connected to each other with a certain name .They are stored on the web server. The website has an address on the internet known as URL ( Uniform Resource Locator). This website can be visited through a computer set or a mobile phone .

**The URL consists of the following**



The elements of the URL are :

1. http : decides the protocol type.
2. moe : decides the server, the computer set with the stored data.
3. www : world wide web
4. gov ; the type of organization and service
5. eg : the country

### Web Page:

It is a document with an electronic content that is published on the internet and shown through a web browser.

### Home Page:

It is the first page on the website ,through which the user can go to other pages.

### Hyperlink :

It is an image or text refers to a URL , when clicking it, you go to the URL .It can be in the same page or on another page or even another site.

### Download files :

It is the process of transmitting or copying files or programs through the internet to the computer these programs can be used offline)





## Upload files

It means to transmit a file or a program from your computer to another on the internet



## The internet services :

The internet provides many services like:

### Search on the internet

The search sites on the internet are considered the most sites visited, as millions of users use them to reach the URLs containing the information they need.

These sites provide the best browsers which are the shortest and easiest way to reach information needed. You can search for websites, text files, images , groups, news, books ..etc.

**-Google:** It is one of the most famous search engines as it contains millions of websites covering nearly all topics.



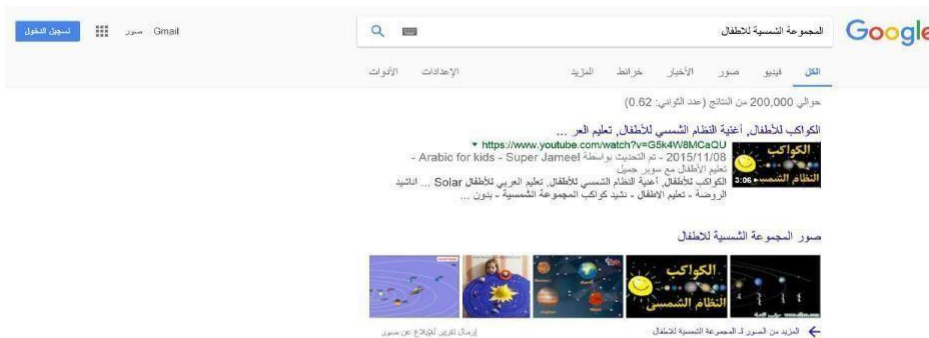
**-Bing:** [www.bing.com](http://www.bing.com)



**Do a search for the solar system using GOOGLE search engine. Write in the search bar on Google , Solar system**



Click “ search” and the results will be shown as follows.



Select one of the search results

## - Mailing List Service

It is a group of lists for e mail addresses used to forward any mail to a group of people . Each list has a certain title. The mail that is sent to the list will reach each member of it.

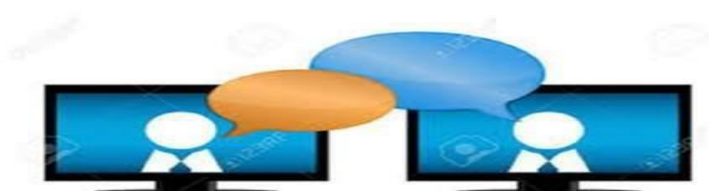
FTP File Transfer Protocol:

It is a service to transfer files on the internet to make it easy for everyone to share files

**New Group :**They are sites on the internet where people gather to share and exchange ideas about certain topics like mathematics, geography, science, etc...



**Chat service:** It is the service of meeting of different people from all over the world to talk to each other at the same time. It is possible to see the picture or hear the voice of other participants.



**Social Media sites Face book & Twitter:**

Through this service the social news is spread among the users. They also publish ideas and opinions.



### **Online shopping service:**

This service is available on some sites, making buying and selling available online.



### **E-mail service**

If you want to send a file to your colleagues with the explanation of a certain lesson , what will you do?

When you are connected with the internet , you can use the e-mail service which allows you to send this file to anyone you like soon. It is the service of exchange e mail which may contain text or images or videos.



### **WWW Service**

It is the abbreviation of worldwide web. It is a means of getting information. It consists of web pages written in HTML language and shown by a certain program called Browser.



**Egyptian knowledge Bank :**



- Open this site <http://www.ekb.eg>
  - Search for how to register and sign in this site, the objective, the inspiration and idea behind it.
  - in order to sign in, you must register new user through the “register” tab
- The form to register new user will appear

[illegible]

**-Select Discovery Education tab from resources**



# Cloud Computing

-It's a developed technology based on transferring the processing and storing of the information from the computer to a cloud, and this cloud is a server or number of servers which can be accessed by the internet.

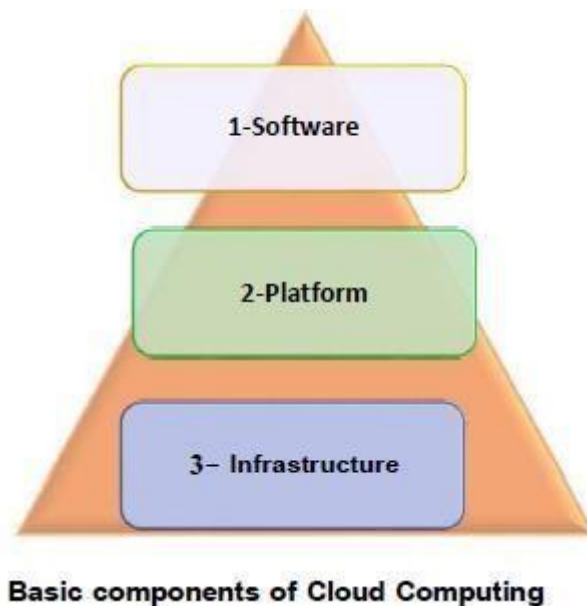
We can use it from home or school using computers, mobiles, or tablets.

## -Main components of cloud computing:

**Software:** It is the applications that user needs like: (Word – Excel sheets)

**Platform:** It is the process of storing files and accessing of database and organize this to all the users.

**Infrastructure:** Preparation of materials like servers, processors, and storage units



## Cloud computing services:

- Email services: Google, Yahoo, .....
- Cloud Storing services: one drive, Google drive.
- Cloud music: I cloud ,sound cloud
- Cloud software: Photoshop express.

## Importance of cloud computing:

- Access your documents from anywhere through the internet.
- Decreasing the costs of used hardware.
- No need to have software licenses.



- It can be used in different fields like agriculture, medical uses.
- Connecting to different websites.
- No needs for maintenance costs.

## Disadvantages of cloud computing

- It needs permanent internet connection.
- Existing of personal information on the internet.
- You can't access your information's if there's any damage in the cloud service.

## Cloud Computing Services

**To use the cloud computing services of Google drive do the following:**

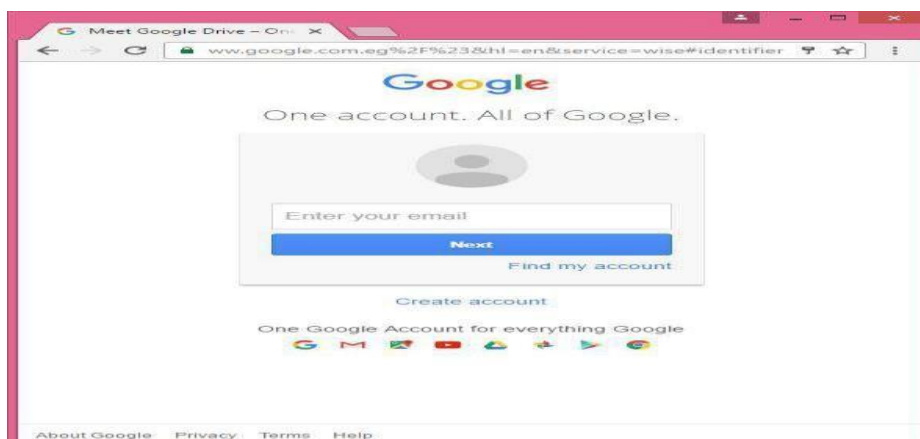
- 1- Create a Gmail account with a suitable name.
- 2-Fill in the required information to create the account
- 3-Activate the account.

## Steps to create an account on Google:

- 1-Open Google browser.



- 2-Click on Gmail from the top of the page.
- 3-Click on Create new account



This page will appear.

**Create your Google Account**

Name  
First Last

Choose your username  
@gmail.com

I prefer to use my current email address

Create a password

Confirm your password

Birthday  
Month Day Year

Gender  
I am...

Mobile phone  
+20

Your current email address

Location  
Egypt (مصر)

**Next step**

4- Fill in the required information.

5- Activate the account by clicking on next step.

To use one of the services of cloud computing...

Open your new account on Google

Google

One account. All of Google.

Sign in to continue to Google Drive

Email

Password

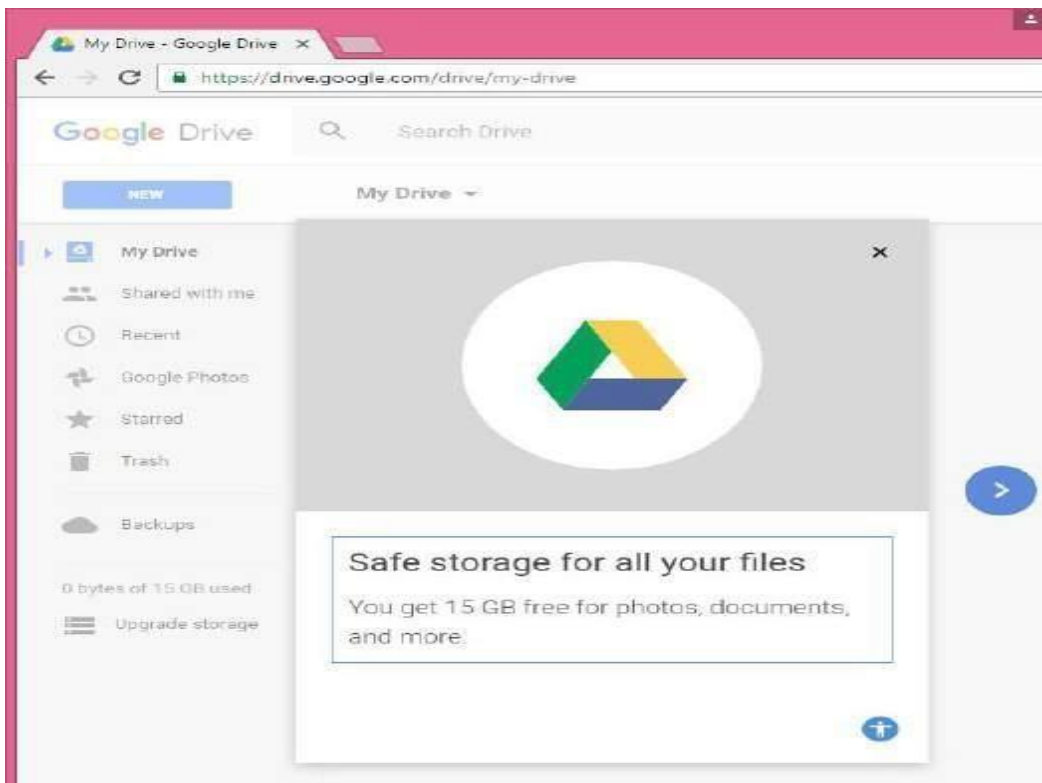
**Sign in**

☒ Stay signed in

[Need help?](#)

[Create an account](#)

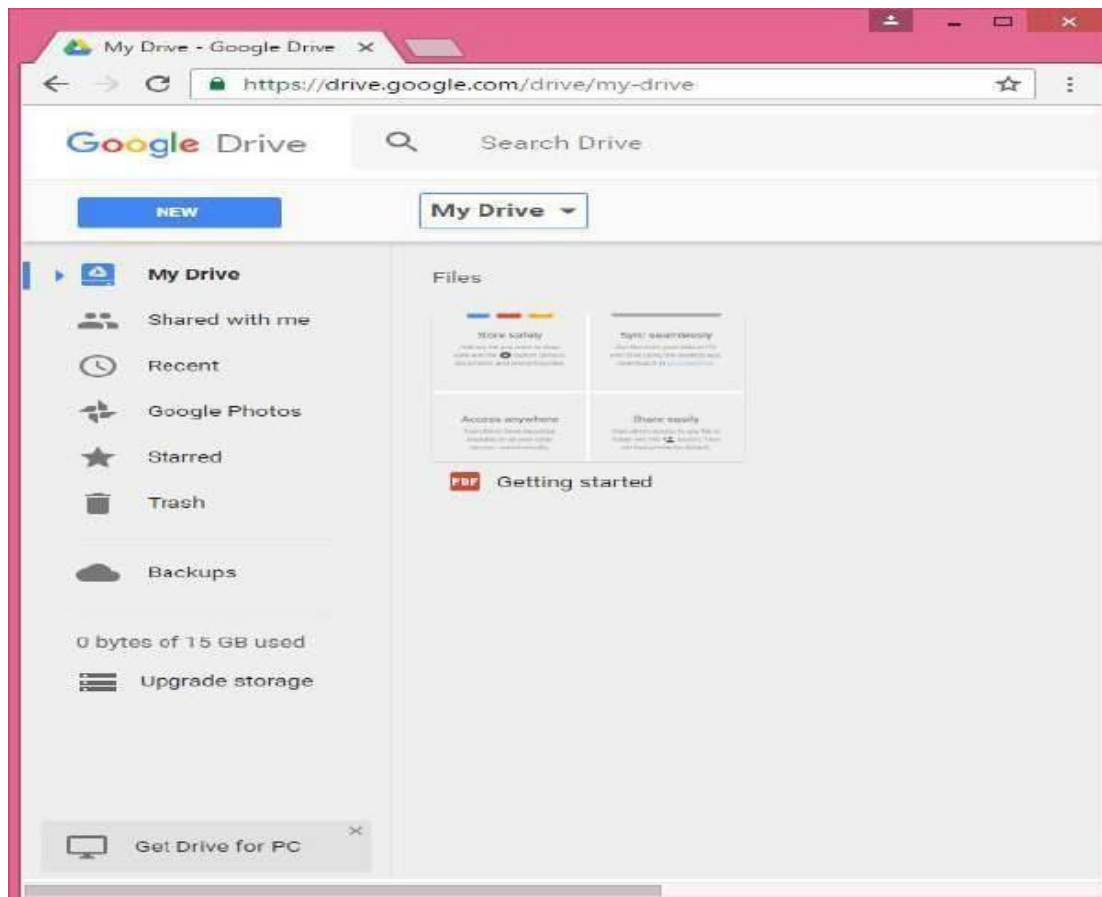
Click on Google Drive



**To create a new document on cloud computing.**

1-Click on new

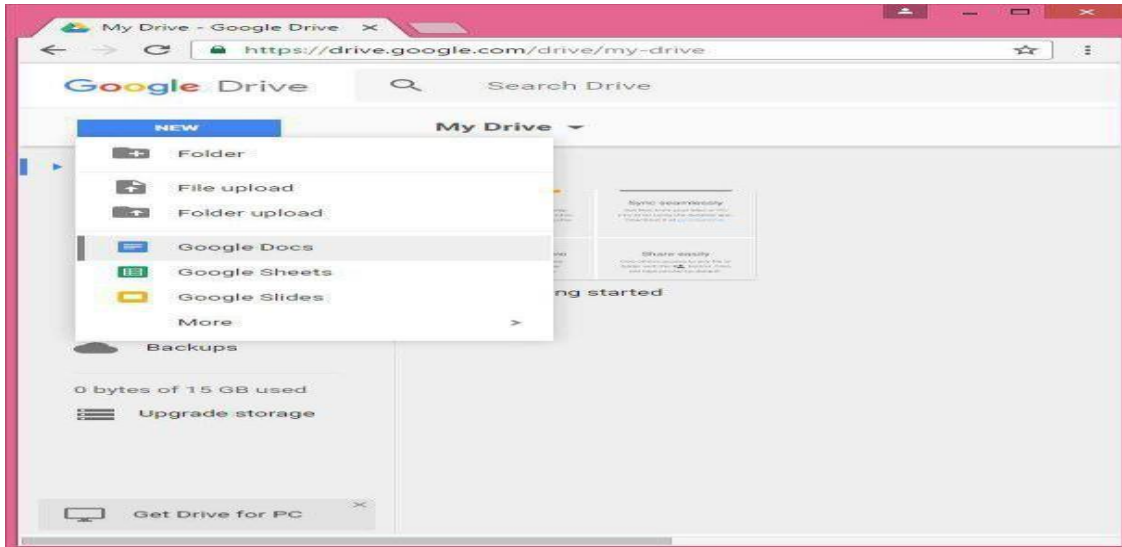
2-Choose Google Docs



A new document will be created

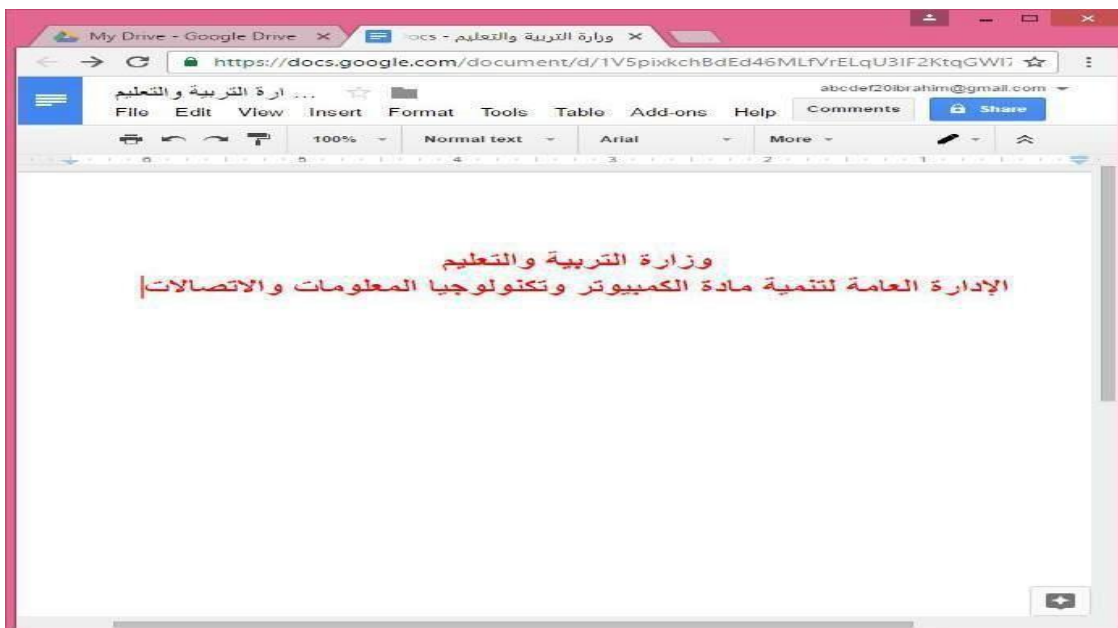
1- Name the document.

2-Write a text inside the document.



To share the document:

1-Click on share button



2-Insert the emails you want to share with them, these e-mails must be on Google.



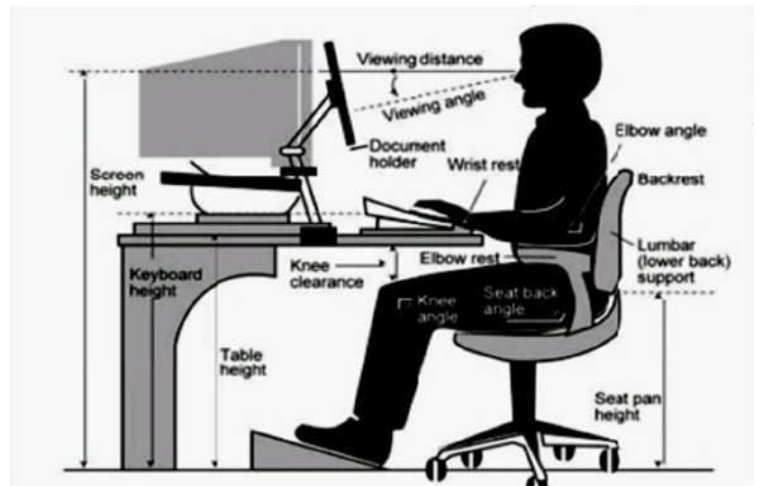
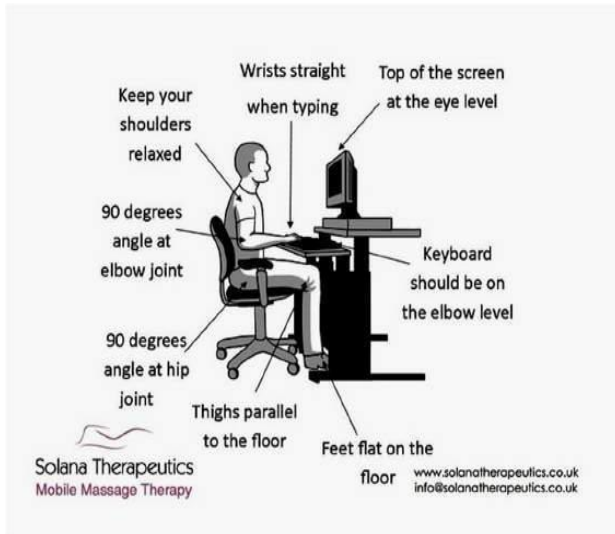
# Internet Safety

It has become reliance that information technology is one of the most important way to communicate in life ways.

But the operation of internet security is very important for the users.

In this lesson we're going to know the right way to sit down in front of the computer and the safety factors for your health while using computers for long times.

## The right way to sit on the computer



## Safe factors to protect your health while using computers.

- 1- Choose the suitable brightness for the device.
- 2- Move your sight every 10 minutes for 10 seconds from the computer monitor and blink your eye to avoid eye dryness.
- 3- Stand up for a minute for every 30 minutes you spent in front of computer.
- 4- The level of your chair and the computer must be suitable, it's preferred to have a chair which enables your back and neck to be in a comfortable upright position.
- 5- Leave a space between you and the monitor from 50 Cm to 75 Cm, where monitors emit radiations with different amounts to the users.
- 6- Move your neck in a random way every 20 minutes, to prevent joints pain.
- 7- The best way for the computer is in front of you and to be far from the human body by half meter.
- 8- Move the hand that uses the mouse from time to time.
- 9- Move your legs while sitting on the computer.

## Some expression and terms for safe use of the computer.

### Cyber Bullying

Is the use of cell phones, instant messaging, e-mail, chat rooms or social networking sites in impolite way

### Happy Slapping

It means one or more people attack a victim for the purpose of recording the assault, and publish it on social media.



## **Phishing**

A con man pretends to be a member in an inquiries organization in order to get a personal or financial information from others through the internet.

The fraudulent practice of sending emails purporting to be from reputable companies in order to induce individuals to reveal personal information, such as passwords and credit card numbers

## **Contempt**

Comment in impolite way in a social conversation.

## **Spam messages**

Undesired E-mails comes from commercials sides and contains viruses or non-ethical components.

## **Firewall**

Devices and programs used to prevent unauthorized login to a specific sites (unsafe)

# Computer

## 1<sup>st</sup> Preparatory

Question (1): Put (✓) or (✗).

- 1) Internet Browser is a group of connected network each network consists of a group of computer sets, communication equipment and lines. (✗ )
- 2) Google Chrome is the most important browser. (✓ )
- 3) We need a computer (installed by the network) card to connect to the Internet (✓ )
- 4) Protocol is a Webpage or more connected to each other with a certain name. ( ✗ )

Question (2): Complete the following using

(Connect to the internet – Internet – IP – Internet Explorer – Protocol – Internet)

- 1) Internet is a group of connected network, each network consists of a group of computer sets, communication equipment and lines.
- 2) Internet Explorer is one of the most important browsers.
- 3) We need Internet Service Provider to connect to the internet.
- 4) Rules for communication between computers over the Internet called Protocol.

Question 3: Match:

	(A)		(B)
1	Responsible for transfer files to or from the internet	A	WWW
2	Of the most important browser	B	TCP / IP
3	Most important protocol used in the internet	C	EG
4	Abbreviation Word Wide Web	D	FTP
5	elements URL determines the country	E	Firefox

(1,D ) ( 2,E) (3,B)( 4,A) (5,C)

Question 4: Write a scientific term:

- 1) Is a webpage or more connecting each other with a certain name.  
(...Website....)
- 2) Responsible for validating data transformed from a set to another.  
(TCP /IP)
- 3) Group of connected network, each network consists of a group of computer sets , communication equipment and lines.( Internet )
- 4) It is a document with an electronic content that is published on the internet and shown  
(Webpage )
- 5) From the elements of the URL refers to protocol type.(HTTP)
- 6) It is the first page on the website through which the user can go to other pages.  
(Home Page)

Question 5 : Complete the following :

- 1) Internet is a group of connected network, each network consists of a group of computer sets, communication equipment and lines
- 2) To connect to the internet , you need :
  - a. Computer set with a network adapter.
  - b. Internet Service Provider.
  - c. Internet browser
- 3) Hyperlink: is an image or text connected to a URL , when clicking it you go to the URL.

Question 6 : What is meant by :

- 1) Internet Service Provider: is a company that provides the service to customers.
- 2) Protocol: certain rules to be followed in speech and communication.
- 3) Website : is a webpage or more , connected to each other with a certain name.



Question 7 : Put (✓) or (✖).

- 1) Search engines are sites provide the best and shortest route to get to the information needed by users. (✓ )
- 2) The address of the search engine Google in the internet is .google.com.www (✖ )
- 3) E-mail service via the Internet is a way to get to the information.( ✖)
- 4) Search service via the internet is e-mail address used to forward any mail to a group of people. (✖ )
- 5) E-mail service used to exchange e-mail, they may contain text , image or videos. (✓ )
- 6) New group service is provided by some sites, it is the service of buying and selling online. (✖ )

Question 8: Complete the following using:

( New groups – online service – Twitter – www – search engine )

- 1) Search Engine used to search in the Websites for the texts, images, groups, news and books.
- 2) WWW is a page written in a language called HTML and shown through a web browser.
- 3) Online service provided by some sites, it is the service of buying and selling online.
- 4) New groups sites on the internet where people meet to exchange ideas and opinions about certain topic( mathematics , geography , science)
- 5) Twitter is from the social media sites.

Question 9: Write the scientific term:

- 1) Sites provide the best and shortest route to get to the information needed by users. (Search Engine)
- 2) Service that allows you to send files to a colleague or more as soon as ( E-mail )
- 3) Social news is exchanged between the community members like Facebook and Twitter. ( Social Media )

- 4) Is the online software meets users from around the world to talk to each other at the same time and you can see the image and hear the voice of the other person. ( Chat )
- 5) Places online where people meet to exchange views and ideas ( New groups)
- 6) Lists of e-mail addresses used to forward any mail to a group of people and a special menu for each title. (Mailing List)

Question 10 : Complete the following :

- 1) ....Google.....is considered one of the most famous search engines on the internet.
- 2) Mail list service is lists of e-mail addresses used to forward any mail to a group of people and a special menu for each title
- 3) File Transfer Protocol , Chat and Mailing lists.. are internet services.
- 4) Online Service is the service of selling and buying on the internet.
- 5) The website of Egyptian Knowledge Bank is <http://www.ekb.eg>

Question 11: What is meant by :

- 1) File Transfer Protocol FTP

A service to transfer files on the internet allowing individuals to exchange files in the internet easily..

- 2) WWW service

It is a way to get to the information, and is a page written in a language called HTML and shown by a program called browser

Question 12: Choose the correct answer

- 1) .....is a place on the internet where people meet to exchange ideas and opinions.  
[ chat - news group – mail list – File transfer ]
- 2) .....is one of the social media sites.  
[ Twitter- dial up – Firefox- all of this ]
- 3) .....allows you to send file to your colleagues fast.  
[ search – e-mail – web – all of this]



Question 13 : Put (✓) or (✗).

- 1) Google offers Google App engine as Google Drive cloud storage services and other computing services. (✓ )
- 2) There is no disadvantage of cloud computing. (✗ )
- 3) From the advantage of cloud computing disability to reach your data in case of a break in the website or the internet. (✗ )
- 4) From the disadvantage of cloud computing reducing the cost through reduce the Hardware cost. (✗ )
- 5) Cloud computing reserves everything in one place. (✓ )
- 6) Create an e-project like the project we need a software program such as texts editor. (✓ )
- 7) Infrastructure from the main components of cloud computing (✓ )

Question 14: Choose the correct answer:

- 1) The most well-known service providers of cloud computing  
(Red Hat – Google – Microsoft – All of them)
- 2) It is the technology that depends on transfer processing and storage of a computer .(Cloud Computing – Red Hat –Google – Cloud )
- 3) From the main components of cloud computing(Cloud Computing – Red Hat –Google – Software )

Question 15: Complete the following with one word from the list below

Cloud applications – Benefits of cloud computing – cloud computing – cloud storage - Google – Cloud – Cloud music

- 1) Cloud computing ..is an advanced technology that depends on transferring processing and storage capacity to what is known as Cloud.
- 2) Cloud applications.. , cloud storage , Cloud music . are some of the cloud computing services.
- 3) The ability of connecting different electronic sites is... Benefits of cloud computing..
- 4) ..... Google are some of the most well-known cloud computing providers.

**Question 16: mention what you know about:**

- The requirements to login cloud computing
  - a) Computer set
  - b) Operating system
  - c) Internet browser
  - d) Internet connection
  - e) Cloud computing provider
- Benefits of cloud computing
  - a) Reduce the Hardware cost
  - b) There is no need to buy original software
  - c) Guarantee the service work continuously
  - d) Share the resources
  - e) Ability to link different websites
- The most well-known service providers of cloud computing.
  - a) Red Hat:
  - b) Google .
  - c) Microsoft
  - d) Amazon

**Question 17-What is meant by**

- Cloud computing Service Provider
  - a) Email service
  - b) Cloud storage
  - c) Cloud Music
  - d) Cloud Applications

**Question 18 : Choose the correct answer:**

- 1) The main components of Cloud Computing are.....  
[ software – platform – infrastructure – all of these]
- 2) .....is one of the benefits of cloud computing.  
[high cost – share resources- secret personal information- None of these]
- 3) Cloud computing providers are like .....  
[ Amazon – Google – Microsoft – All of them ]

**Question 19 : Put (✓) or (✗).in front of the following statements:**

- 1) Cloud computing can be considered as a network of servers with software and applications, which are connected to computers on the internet. (✓ )
- 2) I Cloud , Google Music are email services. (✗ )
- 3) Infrastructure includes the hardware like processors, servers and storage media . (✓ )
- 4) Providing internet connection is not of the requirements to use cloud computing. (✗ )
- 5) Sharing resources is one of the benefits of cloud computing. (✓ )

**Question 20 : : Order the following steps to create a document using a cloud computing service:**

- (2 ) Choose Google Docs from the dropdown menu
- (1 ) Click on New
- (4 ) write the text in the suitable space
- (5 ) Click and write name of the document and the text
- (3 ) write the document name



Question 21: Complete the sentence using:

( Google App – Share – Clouding disadvantage – New – Google Drive ) :

- 1) To create a document using the cloud computing service (Google Docs) Click on the New icon
- 2) To share your document with your colleagues click the Share icon
- 3) To use a cloud service Google Drive is done with your email account that you created.
- 4) From Clouding disadvantages need to have cloud applications to connect to the Internet
- 5) Google offers Google App Engine and Google Drive for cloud storage and other computing services

Question 22: Rearrange

- (3 ) The home page of the site is loaded
- (4 ) Click on Gmail link from the top of the site's home page
- (1 ) Open your Internet browser
- (2 ) Then type the Google URL in the address bar of the browser

Question 23: Complete the following

- 3) To use Microsoft Office 365 service, you have to email account.....
- 4) To create a document using Google Docs, click.....New.....and select...Google Docs... from the drop list.

Question 24: Complete the following

Cloud computing services are like :

- .....Email.....
- ..... Cloud storage.....
- ..... Cloud Music.....

Question 25: Choose the correct answer:

- 1) To share a document with your colleagues, click .....  
(Share-Copy- Cut-Paste)
- 2) To create a new account on Google Drive, select .....  
(sign in-Copy account-Delete account-Create account)
- 3) To create an email account on Gmail, open the internet browser and write Google in the .....  
( tool bar – address bar – menu bar – all of them )

Question 26: Put (✓) or (✗) in front of the following sentences

- 1) To use the Google Drive services, you have to get an email account using the cloud computing. (✓ )
- 2) To create an email account on Gmail, click Google apps and select Drive. (✓ )
- 3) The allowed account to share document with by using Google Drive must be on Google. (✓ )
- 4) You can save a document you created by using Google Drive service. (✓ )

Question 27: Complete the following

To keep your health during using the computer , you have to.....

- 1) Select the suitable light source
- 2) Around your eyes every 10 minutes for 10 seconds
- 3) Stand for a minute after every 30 minutes
- 4) Move your hand using the mouse

Question 28: What is meant by the following :

1) Cyber Bullying:

It is the wrong way of expression in chat rooms or messaging or even SMS either on the internet or the phone.

2) Contempt:

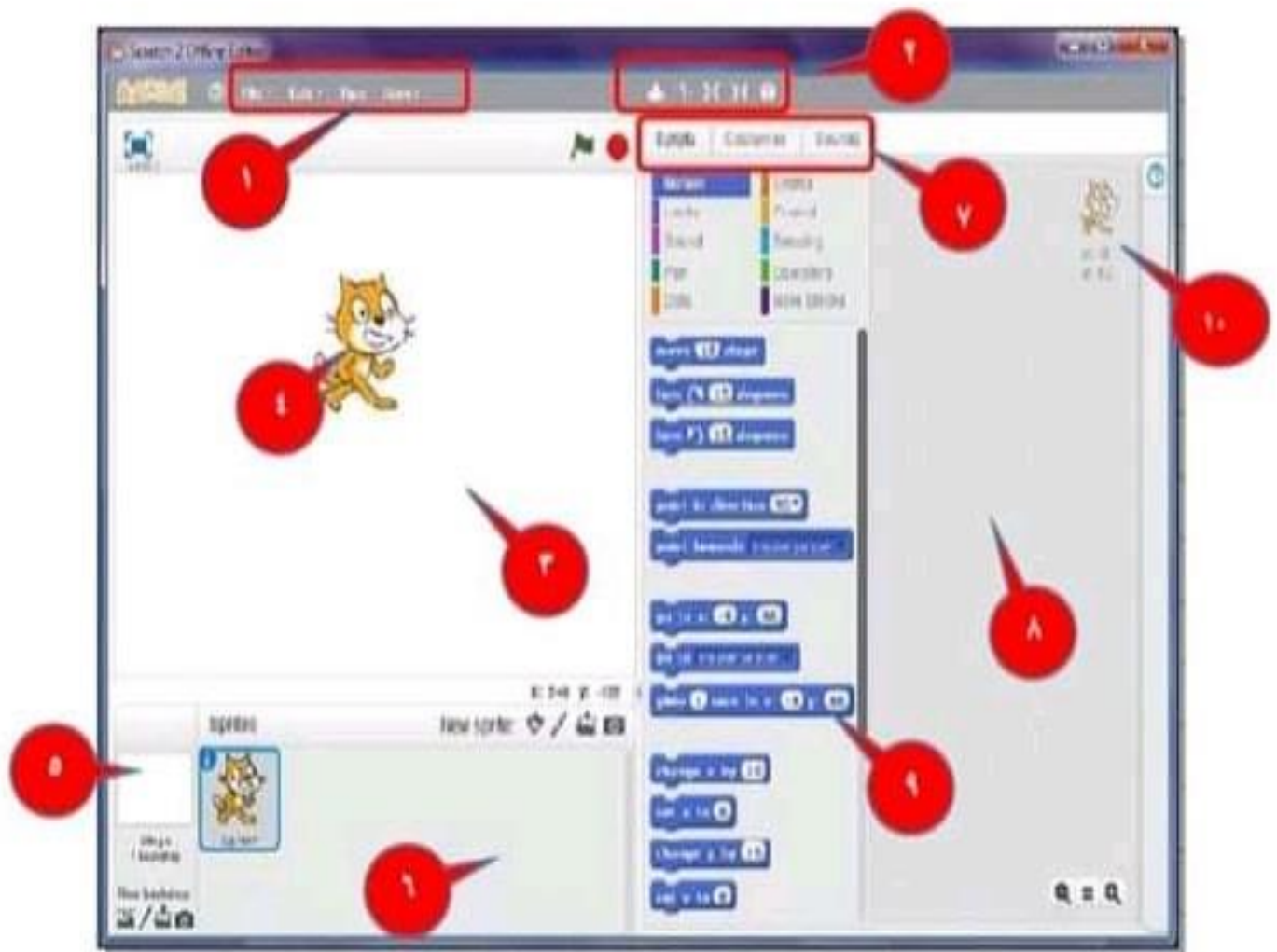
It is adding rude comment in a chat online

3) Spam messages:

They are the undesirable messages that come from different places with advertisement or news



Question 29: Complete the follow Scratch interface component



- 1) Menu bar.
- 2) Toolbar.
- 3) Stage area (it appears as a result of work or project).
- 4) The Sprite.
- 5) The backdrop of the stage (you can add different backgrounds to stand).
- 6) Sprites Area (no of sprites used by the project).
- 7) Tabs (Script-Costumes-Sound).
- 8) The Script Area (the code sections gather "installing a set of drawing commands in a specific order).
- 9) Blocks Area( command sets area.)
- 10) Point (X, Y) represents the position of the sprite on the platform Stage



Question 30: Change interface language to Arabic language – write the steps

- 1) From the menu bar of the program click on set language icon
- 2) From the drop-down list choose Arabic



Question 31: Choose the correct answer

- 1) (Scratch - Linux – Windows) is a graphical language for visual programming
- 2) Scratch can be run on the operating system (Linux - Windows - all operating systems)
- 3) From the main components of Scratch's screen (Stage - menu bar - all of the above)
- 4) To change the language of the Scratch interface select the code (Sprite - Stage - Select language)
- 5) (Scratch - Google Chrome - Windows) is one of the most important Internet browsers.

Question 32: Explain the function of each of the following forms in the pointer toolbar and its impact on the sprite

task	icon
Minimize	
Maximize	
Duplicate	
Delete	
Help	


**Question 33:** Second question: explain the difference between repetition commands:

forever	repeat 10
Used to repeat it to infinity	Used to repeat it 10 times

**Question 34 :** tick (✓) in front of the correct term and sign (×) in front of the wrong term:

- 1) You can put a picture of the background file for the stage. (✓ )
- 2) There are multiple aspects to all sprites. (× )
- 3) Arrange the commands do not affect the outcome of execution a program. (× )
- 4) You cannot control the direction of rotation of the sprite during design. (✓ )

**Question 35 :** explain the result of the application of the group code straggling to any sprite:

Code blocks	function
	<p>use color change command sprite using the value effect (25).</p> <p>2. using the wait (1 second).</p> <p>3. previous orders placed inside is repeated endlessly.</p> <p>4. run the program icon Program execution continues an infinite number of times</p>